Using conversation analytic methods to assess fidelity to a talk-based healthcare intervention for frequently attending patients

ABSTRACT

The study aim was to assess implementation fidelity (i.e., adherence) to a talk-based primary care intervention using Conversation Analytic (CA) methods. The context was a UK feasibility trial where General Practitioners (GPs) were trained to use "BATHE" (***B****ackground,* ***A****ffect,* ***T****rouble,* ***H****andling,* ***E****mpathy)* – a technique to screen for psychosocial issues during consultations – with frequently attending patients.

35 GPs received BATHE training between July-October 2015. 15 GPs across six practices self-selected to record a sample of their consultations with study patients at three and six months. 31 consultations were recorded. 21/26 patients in four intervention practices gave permission for analysis. The recordings were transcribed and initially coded for the presence or absence of the five BATHE components. CA methods were applied to assess delivery, focusing on position and composition of each component, and patients' responses.

Initial coding showed most of the BATHE components to be present in most contacts. However the CA analysis revealed unplanned deviations in position and adaptations in composition. Frequently the intervention was initiated too early in the consultation, and the BATHE questions misunderstood by patients as pertaining to their presenting problems rather than the psychosocial context for their problems. Often these deviations resulted in reducing theoretical fidelity of the intervention as a whole.

A CA approach enabled a dynamic assessment of the delivery and receipt of BATHE *in situ* revealing common pitfalls in delivery and provided valuable examples of more and less efficacious implementations. During the trial this evidence was used in top-up trainings to address problems in delivery and to improve GP engagement. Using CA methods enabled a

more accurate assessment of implementation fidelity, a fuller description of the intervention itself, and enhanced resources for future training. When positioned appropriately, BATHE can be a useful tool for eliciting information about the wider context of the medical visit.

KEYWORDS: Feasibility trial, primary care consultations, frequent attenders, BATHE technique, implementation fidelity, conversation analysis

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Introduction

In randomised controlled trials (RCTs), the importance of assessing 'implementation fidelity' (whether an intervention has been implemented as planned) was first noted by Basch, Sliepcevich, Duncan & Kolbe (1985). Basch et al. (1985) highlighted the danger of incorrectly accepting a null hypothesis when it is the result of an (unknowingly) inadequate implementation, with the consequence of discarding a potentially effective intervention. The primary goal of assessing implementation fidelity is to increase scientific confidence that the planned intervention has been adequately tested, and that the measured outcomes are a reliable indication of its effectiveness.

The starting point for fidelity assessment is to have a clear description of the intended intervention in order to compare this to what was delivered. However, this is not always straightforward. In some trials the intervention is necessarily under specified. The main consideration from this perspective is that there may be more than one route to achieving the intended outcome. In such cases trialists may deliberately avoid specifying the precise form of an intervention due to an assumption that it may need to be adapted to the diverse contexts in which it is being evaluated e.g., in primary care settings and trials of 'talk-based interventions' (i.e. those geared towards stimulating interaction around particular topics or concerns, as opposed to physical treatments). Moreover interventions are often adapted by those who are delivering them, sometimes intentionally to accommodate them to the context of their delivery, but also unintentionally due to inadequate training, 'drift' from

the original protocol, or 'decay' in provider skills over time (Bellg et al. 2004). Many protocols therefore describe interventions in terms of principles and intended functions rather than specifying too closely the form and/or detail of how those principles are to be implemented. Consequently, 'fidelity of form' (where the form of intervention to be implemented is precisely specified), has been distinguished from 'fidelity of function' (where the form of implementation is less important than it fulfilling the intended function) (Hawe Shiell & Riley, 2004).

There are a limited number of methods in use for assessing implementation fidelity and not all are ideally suited to assessing talk-based interventions. Conversation Analysis (CA) is widely considered to be the dominant contemporary method for the analysis of talk-in-interaction (Heritage, 2009). Indeed Robinson and Heritage (2014) have argued that CA methods may be a viable option for assessing the implementation fidelity of talk-based interventions. They give the example of a primary care trial evaluating the effectiveness of upfront agenda setting for the reduction of unmet patient concerns (Heritage, Robinson, Elliott, Beckett & Wilkes, 2007). Doctors were trained in a tightly specified talk-based intervention to ask, following the problem presentation, if patients had "any" versus "some" further problems or concerns. All study consultations were recorded, and monitored to identify instances where doctors failed to perform the intervention correctly. In a retrospective analysis of 144 video-recordings of the delivery of the intervention during the trial, Robinson and Heritage (2015) demonstrated that despite high levels of provider implementation fidelity, patients' misunderstanding of the action being implemented by the intervention question could cause them to withhold non-new problems in their responsive turns. In other words, their analysis demonstrated how *in situ*, fidelity of form could unintentionally impact on fidelity of function.

Pilnick and James (2013) have also argued for the utility of CA methods in addressing the way

in which talk-based interventions are assessed. Focusing more on fidelity of function than form, they argue that some interventions are less easy to translate into discrete actions. Pilnick and James report an assessment of a single video-recording of an encounter between a therapist and a parent of a child with a hearing impairment from a trial of a therapeutic intervention - Video Interaction Guidance. Through detailed description and analysis they demonstrate the scope of CA methods in unpacking the intervention process – how its guiding principles are enacted.

So for a variety of talk-based interventions, CA methods might enable a unique take on fidelity of form and function, and on delivery and responsiveness *in situ*. Offering more than a window into the extent to which an intervention is being delivered as planned, CA methods can also demonstrate why it may not be working, what else is happening, and how the intervention might be affecting routine practice i.e. other consultation tasks and goals. In other words, CA methods can help characterise the "real-world nature" of fidelity (Masterson-Elgar, Burton, Rycroft-Malone, Sackley & Walker, 2014) in trials of talk-based interventions.

Rather than eliciting self-reports from providers or patients themselves, or using direct observation - the current 'gold standard' Bellg et al. (2004) - to judge the presence or absence of pre-specified intervention components, CA starts from observations made from the recorded data itself. Whereas the data generated from checklists are usually quantitative and separate the behaviour of the intervention provider and recipient, CA preserves the qualitative nature of recordings and the analytic focus encompasses all parties to the interaction. Therefore delivery and immediate responsiveness can be assessed together. CA methods allow for the identification of a range of linguistic and other resources that providers are drawing on to implement and integrate an intervention. Analyses can

therefore provide an evidence base for the degrees of local tailoring and its impact on theoretical fidelity (i.e., whether local adaptations are consequential for how the underlying intervention theory predicts it should work). Working with recordings and detailed transcripts also means that analyses can be independently checked for agreement.

The idea for this study originated in a GP surgery where staff felt that improvements could be made regarding how it was caring for its most frequent attenders. This idea was developed into a Royal College of General Practitioners award-winning patient-focused intervention including training GPs in the "BATHE" technique (Stuart & Lieberman, 2015). BATHE is an acronym for Background, Affect, Trouble, Handling, and Empathy – see Box 1. It is a well-specified talk-based intervention based around a brief series of linked questions. Its function is to promote discussion of the psychosocial aspects of patients' lives, to be an informal screen for emotional problems, to connect with the patient, and to support self-management (Stuart & Lieberman, 2015).

INSERT BOX 1 ABOUT HERE

The study was designed as a 12 month feasibility cluster randomised trial involving six GP surgeries (4 intervention, 2 usual care control). The aim was to explore the key uncertainties to a main trial to evaluate effectiveness and cost-effectiveness. One of the study objectives was to assess whether it would be possible to train other GPs to use BATHE and to assesses the extent of implementation fidelity.

Methods

South West - Central Bristol NHS Research Ethics Committee gave formal approval for the study. Eligible patients were determined by a search of practice records for those aged 18 or over falling in the top three percent of attenders over the last 12 months. GPs then reviewed each patient record and excluded: (i) patients whose level of attendance could be accounted for by a diagnosed physical or mental illness; (ii) patients with life-threatening illness such as cancer (iii) patients over 80 years with 4 or more medical problems; iv) patients at high risk of hospital admission; v) patients undergoing distressing one-off events such as bereavement; and vi) vulnerable adults and patients without capacity to provide informed consent. At the start of the trial, eligible patients were informed by letter that their practice was participating in a study to try and improve their care. Patients in intervention practices were told that their GPs would be receiving extra training in consultation skills as part of the study.

Participating GPs in intervention practices were trained in-house by an experienced BATHE trainer. The training lasted for one hour and consisted of an overview of the trial and a talk introducing the technique and its underlying principles. The GPs were asked to initiate BATHE towards the end of history-taking and encouraged to adhere to the original question wording (see Box 1) as much as possible. This was followed by an invitation to role-play and an opportunity to ask questions. GPs were given a small prompt card to remind them of the BATHE components to place in their consulting rooms and encouraged to practice using the technique before the intervention went 'live'. This being a feasibility trial there was no *a priori* specification of 'treatment dose' (the amount of times they should use BATHE with each patient). Instead, GPs were asked to incorporate BATHE into all consultations with eligible patients, when and if they saw fit excluding urgent care, and to document its use in the patient record for audit purposes.

As part of the study protocol, a plan was developed for how monitoring of the intervention.

Up to three participating GPs from each intervention practice were invited to record a sample of face-to-face and telephone consultations with eligible patients at two time points during the intervention period (3 months and 6 months) prior to top-up trainings at 4 and 7 months. For face-to-face consultations, video was chosen over audio-only, to enable consideration of visual, vocal and verbal communication behaviours, and to provide greater impact for future training.

Recordings were also made in the two practices randomised to deliver usual care. Fidelity to usual care in trials is often under-reported (Erlen et al., 2015) so the aim here was to monitor whether GPs in control practices might have unwittingly included any of the BATHE components when consulting with frequent attenders (e.g., due to overlap between BATHE and other patient-focused consultation techniques or through prior exposure).

Participating GPs were given video cameras with built in microphones, tripods, instruction sheets, a patient log and participant information packs. During an agreed two-week period, GPs were asked to set up the camera in their consulting room to capture both GP and patient but avoiding the examination couch. Telephone consultations were audio-recorded using a dedicated call recording service. Eligible patients, who had all previously received a letter about the study, were alerted to the recordings by reception staff and/or their GP just prior to their consultation. A two-stage approach to consent was taken. Firstly, prior to the consultation, GPs asked patients for permission to record. Secondly, if they agreed to the recording, at the end of the consultation patients were given or posted an information sheet and consent form. Written consent was required for the recording to be available for analysis and to be used for future training.

15 GPs (5 male, 10 female) across all study practices self-selected to make consultation recordings. 14 GPs made successful recordings ranging from one to five per GP. 31 eligible patients (10 male, 21 female), 26 from intervention practices and five from control practices

gave verbal consent to record their consultations (23 face-to-face, 8 telephone). In this article we focus on the recordings made in the intervention practices. Consent for analysis was received post-recording from 21/26 intervention patients (16 face-to-face, 5 telephone). Table 1 shows the breakdown of the intervention practice recordings.

INSERT TABLE 1 ABOUT HERE

Basic data was logged for each recording including study practice, GP and patient identifiers, mode of consultation (in-surgery or telephone), and time point in the study. We also coded for the presence or absence of each of the five BATHE components. This enabled us to compare the extent of delivery for each component across intervention practices. Standard transcripts in qualitative research are usually meant for basic content analysis and omit much of the detail of talk-in-interaction. All recordings with consent for analysis were therefore transcribed using Jefferson's (2004) standard conventions for CA – see Box 2 for a key to transcription symbols.

INSERT BOX 2 ABOUT HERE

CA methods were used to identify and build 'collections' of instances of recurring communication practices employed in the delivery and receipt of each of the BATHE components (see Sidnell, 2010). As Schegloff has argued, "both *position and composition* are ordinarily constitutive of the sense and import of a component of conduct that embodies some phenomenon or practice" (1993, p. 121). Our analysis included how patients' understandings of the actions implemented by the five different components of BATHE were informed by not only composition - its linguistic form and *how* it was delivered - but the

position in which it was located within the wider organisation of the different activity phases of the consultation itself. In the next section we present our initial findings regarding the presence and absence of each BATHE component and contrast these with our CA-grounded observations on patterns in delivery and receipt.

Results

All five BATHE components were delivered in only 58% (n=15) of cases (range 33%-75% between practices). Four or more components were delivered in 85% (n=22) of the recorded consultations. Partial implementations (less than four components) were noted in three cases and in one case, the GP failed to deliver the intervention altogether. In 19% (n=5) of cases, two of the BATHE components were delivered out of order. In one case, four components were delivered out of order. Despite receiving the same training, this suggested considerable variation in implementation. Closer analysis revealed that when left to their own interpretive devices, GPs sometimes adapted the form of the components and/or otherwise deviated from the training during implementation. In what follows we present illustrative examples of each component of BATHE (bolded out in the extracts presented) focusing on: common adaptations and deviations in delivery; how the intervention was responded to by patients; and the extent to which any changes were consequential for the intended function.

Background

The background or 'B' question, "*What is going on in your life?*" initiates the BATHE question series. GPs were trained to ask this question – essentially a news inquiry – towards the end of

their information gathering activities for the presenting problem. As a 'request to tell', its intended function is to solicit the wider psychosocial context for the patient's presenting problem or concern. GPs asked this question in 24/26 of our sample consultations. Responses ranged from reporting changes in social status, such as having retired or returned to work as in Extract 1, to 'no-news' (Button & Casey, 1984) as in Extract 2.

(1)

1 DOC: **Wha::t ↑so:: w- I m'n what's going on in your life at the moment.**

2 PAT: ↑U::::m,

3 (1.5)

4 PAT: I'm I'm wo:::rki:::ng u:m I'm better than I was befo:::re,=

5 DOC: =Oh that's really good to hea:::r,

(2)

1 DOC: **↑What's going on in your life_ (0.5) sort'ov outside of a:ll these medical (0.6) things**

2 **that're happening=an an the drinking w- w- w- whas (.) y- (0.4) whas what's**

3 **↑happening in your life?**

4 (3.6)

5 PAT: Not a ↑lot?

6 (0.4)

7 DOC: °°Right.°°

In both cases above the GP has adapted the basic form of the question. The transcripts show non-lexical evidence of self-repair (e.g., cut-offs and sound stretching), signalling self-monitoring for potential obstacles to understanding. In Extract 1 the addition of "at the moment" constrains the topical focus to 'current news', and in Extract 2, lines 1-2, the additional recipient-designed parenthetical inserts constrain the focus to newsworthy items outside of the patients' current medical concerns. These changes in form were considered successful adaptations in the sense that they were formulated in such a way as to display

sensitivity to prior talk and enhance patient understanding of the function of the question. However, a different type of adaptation proved more problematic. For example, when GPs asked "*How* have things being going", rather than "*What*'s going on", the action implemented was understood more as a personal state inquiry (Sacks, 1975), than a news inquiry. For example, in Extract 3 below, at line 2, the patient begins her response with "we:ll fi:ne".

(3)

1 DOC: .**Hh >u:hm< (0.5) anywa::y=ho:::w uhm have things bee::n >uh going in your li:f::e.<**

2 PAT: .Hhhh we:ll fi:ne except my ba::ck is getting progressively wor:::se. This is why I rang Doctor

3 *Name*.

Sacks (1975) has shown that given the occurrence of neutral responses (such as 'fine') to personal state inquiries, no further inquiries on that topic are appropriate. In this example the patient provides a neutral response, although the sound stretching shown in the transcript hints at more to come, and she then expands her turn to refocus matters on a physical problem - her reason for the call. The upshot being that this kind of adaptation may result in failure of intended function.

In Extract 4 below another GP adapts the form of the 'B' question to a personal state inquiry, whilst attempting to constrain the focus to 'things at home' i.e., outside of the patients' current medical concerns.

(4)

1 DOC: **So, (0.2) ho::w're other things=at at home and whatsit_** ↓Is ↓tha:t (0.6) allri::ght?

2 PAT: Y:e↑a:::h fi:ne_

3 (1.6)

4 PAT: I don't know what you mea:n about that but,

This time, the sound stretching and a mid-word pitch increase shown in the transcript accompanying an ostensibly neutral response from the patient at line 2,, "Y:e↑a:::h fi:ne_", heralds the trouble displayed at lines 3 and 4. This particular problem of understanding may be explained by incorrect positioning – the GP's question was launched in the middle of the physical examination. Because the structural organisation of medical activity shapes doctors' and patients' communicative behaviour (Robinson, 2003), when this is disrupted, it may result in some kind of 'activity contamination' (Jefferson, 1980; Jefferson & Lee, 1981). On other occasions, GPs deviated from the training by asking the 'B' question too early in the consultation i.e., prior to, or immediately after, having solicited patients' problem or concern. In Extract 5 below the GP initiates BATHE at the very start of the consultation and the patient displays having understood the action being implemented as soliciting their reason/s for the visit.

(5)

1 DOC: **>So what's going on with you at the moment.<**

2 (0.5) ((*PAT is looking in her bag*))

3 PAT: U::::m (.) there's a few thi:ngs.=So I: I just had surgery?

The interactional consequence is that the intended function of the 'B' question has failed. Similarly, patients had trouble understanding the action being implemented by the 'B' question if GPs initiated BATHE immediately after having received patients' reasons for the visit. In Extract 6 below, the patient has requested an extension for her sick note and in

response to the GP's adapted 'B' question, following the neutral, ">N't< too bad", adds a further medical problem to the agenda.

(6)

1 DOC: **And how are things going otherwise in your life at the mo:ment.**

2 (1.8)

3 PAT: >N't< too bad=but I have got that other >problem that I've been mentioning to you< as WE::LL?

In Extract 7 below, the patient has just completed his reason for the visit - he is having trouble swallowing.

(7)

1 PAT: Well I've got=u::m (0.5) everytime I try'an (0.5) like (.) drink anythink, (0.9) it seems if I'm (0.9) I

2 can't drink it=it's (0.3) (seems if) my throat is blocked.

3 (0.6)

4 DOC: Mhm? ((*Nodding*))

5 (0.3)

6 PAT: So could you have a look an give me sum summink to get rid of it. So=at I c'n::

7 (0.5)

8 DOC: H:::m (0.3) H::m. **So tell me what's been happening in your life.**

9 (1.8)

10 PAT: What d'you mean doctor? ((*Both palms outstretched*))

11 DOC: Wah >tell me a little bit< about this_ ((*Gestures to PAT's throat*))

At line 8, the GP initiates the 'B' question, which is met with silence. In response to the patient's repair initiator at line 10, "What d'you mean doctor", the GP abandons all but the "tell me" framing of his prior turn, hurriedly replacing the intervention with a more expectable request for more information on the presenting complaint.

Finally, two GPs initiated BATHE during the closing phase of the consultation. Again this deviated from the instruction given during training to initiate it towards the end of the

information gathering phase for a patient's complaint. In Extract 8 below despite the GP deploying the correct form of the 'B' question, the patient arguably displaying an understanding of the prior as initiating 'small-talk' rather than soliciting further context to her presenting problem.

(8)

1 DOC: **So: (.) other↑wise, what's happening in your li:fe?**

2 PAT: .Hh ↓well (0.7) (h)uh (.) £not a lot at the minute?£ .hh u::hm (0.6) I'm go:ing (0.3) to Ireland

3 (1.5) on Wednesday?

These deviations are important - a simple checklist approach to fidelity might have assessed the 'B' questions as being present and, in terms of form, having been deployed correctly. However, a closer analysis of delivery and response demonstrates failure of function. Most failures were explained by positioning in the wider interactional context – the structural organization of activities in the primary care consultation (Robinson, 2003). The 'B' question was responded to as inapposite when launched at a time when patients were expecting to present their medical problems / concerns, additional information to be gathered, or when the main business of the consultation was deemed to be complete.

Affect:

Following on from 'B', the 'A' question about affect, e.g. '*How do you feel about that?*' is assumed to have a dual function: a) to solicit the patient's emotional response to the situation described in 'B', and b) to be therapeutic (Stuart & Lieberman, 2015). In our sample, the 'A' question was the least commonly delivered component (17/26 consultations). However on six of these occasions the patients themselves had already provided clues earlier as to how they were feeling and GPs naturally deviated from the training by moving straight

from ‘B’ to the ‘T’ question. Where the ‘A’ question was asked by GPs, patients did not generally display any trouble in responding and it appeared to function well as a screen for psychological distress and an opportunity for emotional connection. See Extracts 9-10 below.

(9)

1 DOC: **>So ↑overall how’re you ↑↑feeling about< [the whole thi:ng.**

2 PAT: [Phw:::::h ((*dropping shoulders))*

3 PAT: .Hhh >I feel like s:tre- ((*raises both hands*)) .h yest- uh a coupl’ov days I felt like Rh::rrr ((*raises hands outstretched*)) like anger ((*clenches fists*)) sort’ov stress.

(10)

1 DOC: **°How d’you fe:el about that.°**

2 (2.7)

3 PAT: .Hh very (1.4) tuh (1.5) a- almost (.) like a- a- at some points, (2.4) suicidal.hh

Some GPs adapted the form of the ‘A’ question by repackaging it as an affective state formulation (Heritage & Watson, 1979) for confirmation e.g. “so it’s making you fee::l quite down in the dumps”, “And >you’re prob’ly feeling< (0.6) >really a little bit< vulnerable with that, are you?” and “>so I m’n it< sou::nds as though it is still something that does get you do:wn?” in Extracts 11, 12 and 13 below.

(11)

1 DOC: **.HHhhhh [↑Ha- an is it meh- an so it’s making you fee::l quite [down in the dumps.**

2 PAT: [An I jus- [Depressed,

3 PAT: ((*nodding*)) m::m.

(12)

DOC: **And >you’re prob’ly feeling< (0.6) >really a little bit< vulnerable with that, are you?**

PAT: *((Nods*))

DOC: Yea:h. [°M’kay.°

PAT: [>.Skuh h(hh)uh< *((crying*))

(13)

1 DOC: **.Tk >so I m'n it< sou::nds as though it is still something that does get you do:wn?**

2 PAT: Yes it does.

In these cases although the wording or form of the question has been adapted, the function was preserved. However, it should be noted that efficacy may be reduced. On the patient's side, the action of confirming a candidate feeling state, is different to volunteering a feeling state in ones' own words. With the former, as shown in Extracts 11-13, structurally, the preferred response is confirmation. Hence patients may be more likely to withhold a disconfirming answer. In contrast see Extract 14 below where an older patient who is experiencing increasing difficulties with her mobility does give a fuller response following a series of questions by the GP:

(14)

1 DOC: **.Hhh an an are you are you quite happy at the moment? How're you feeling.**

2 (0.9)

3 PAT: ↑Oh alri:ght.

4 (0.5)

5 DOC: Is is ↑this business about (0.3) having tuh (0.7) going out with *Name* cos you used to walk

6 to the town every [da::y.

7 PAT: [Yea::h_ NO. I can't do it.

8 (0.4)

9 PAT: I can't do it by meself.

10 (0.3)

11DOC: **How d'you feel about tha:t. Is it alri:ght or y- or is it bothering you_**

12 (2.5)

13PAT: ↑We:ll they're very busy. See=so shh (0.3) she ↑can't always (0.6) take me out? Y'kno:w,

14DOC: Ye::ah.

15PAT: I 'aven't bin out for weeks really?

16 (0.3)

17DOC: U:::h. [Is

18PAT: [An I miss it,

19DOC: Ye::ah.

20PAT: Ow I miss it terrible

When the 'B' question had been delivered too early and interpreted by patients as soliciting a physical problem, GPs often failed to repair this misunderstanding. Many patients therefore went on to interpret the subsequent 'A' question as inquiring about how they were feeling physically rather than emotionally. On these occasions the 'A' question failed to achieve its intended function. See Extracts 15 and 16 below:

(15)

1 DOC: **An an how you how does this make you feel. All of these [pains.**

2 PAT: [Tired. Cos it (.) it does drain me_

3 (0.5)

4 DOC: Yea::h.

5 PAT: Seems to take all me strength away.

(16)

1 DOC: **.Hh An-d how d'you feel about (.) that_**

2 PAT: >I feel a little bit< (0.6) gid- you know, drowsy an all that? Uhm y'kno:w?

Trouble:

Following on from 'B' and 'A', the 'T' question, "*What about the situation is troubling you the most?*" is considered to be the most important of the BATHE questions. The assumption being that by asking this question, GPs can support the patient to reflect on the meaning of the problem or situation, often laying the ground for consideration of how they might deal with it constructively (Stuart & Lieberman, 2015). In our sample, the 'T' question was one of the most commonly delivered components (24/26 consultations). In Extract 17 below the patient reflects on her frustration with her increasing lack of mobility.

(17)

1 DOC: **.Hhh u::hm (.) a::nd ↑what about your situation troubles you the most.**

2 (1.0)

3 PAT: .Tch .hh o::hhh well I u(h)uh I s'pose I'm being a bit stupid really cos I mean I used to

4 be so active active .hh proba'ly more than a lot of people. But=uh .hhh I've gotta to

5 take into account that I'm no::w eighty two, so I prob'ly wouldn't have been as

6 active anyway? .Hhh but I find it very frustrating not (.) being able to do what I used

7 to do.

Similarly in Extract 18, the patient who has recently moved house shares how her anxiety is manifesting in her current situation by reporting her private thoughts (Barnes & Moss, 2006).

(18)

1 DOC: **D'you [know what the m- thing that's troubling you the ↑most is at the moment**

2 PAT: [Hhhh

3 DOC: **d'you thi:nk_**

4 PAT: Uh:m I (.) worry about things sometimes, >[I start< .hh ↓o:h ri:ght >I've gotta get the<

5 DOC: [M:hm?

6 PAT: floor i:n, .hh >I gotta do< thi:::s, >[I gotta do< tha:t.

7 DOC: [°Mm::n°.

However, once again when the BATHE sequence had been initiated too early, as with the 'B' and 'A' questions, many patients went on to interpret the subsequent 'T' question as inquiring about what was most troubling about their current presenting problem. The examples below show that on such occasions the 'T' question serves to either focus in on the most troubling physical symptom as in Extract 19, or to attempt to narrow down the patient's agenda for the consultation as in Extract 20.

(19)

1 DOC: **An what's the wo:rst thing ((*DOC points to own ear*)) about (.) all of thi::s_**

2 (0.5)

3 PAT: ↑Uh:m (h)hh (1.0) it hu:rts to chew,

4 DOC: Ye:ah?

(20)

1 DOC: **And so ↑out of the things you've mentioned your chest and the insomnia which .hh**

2 **what's bothering you most about the situation.**

3 (0.5)

4 PAT: ↑I bo::th to be quite honest_

In both the above cases the GPs also adapt the question with additional visual resources (in Extract 19 the GP points to his ear), or verbal resources (in Extract 20 the GP by referencing the patient's reported physical complaints – "your chest and the insomnia") to focus in on physical problems.

Handling:

Following on from 'B', 'A', and 'T', is the 'H' question, "*How are you handling that?*" Stuart and Lieberman (2015) argue that asking a patient how they are handling a trouble can reveal

any coping strategies already in play whilst allowing the inference to be made that this is the patient's domain. The 'H' question was present in most of the sample recordings (22/26 consultations). In Extract 21, the patient is struggling to cope with managing childcare with her recurrent sinus pain.

(21)

1 DOC: **An ↑how d'you h<u>a</u>ndle that situation when you've g<u>o</u>t (.) the pa:in, when you can't do**

2 **what °you want to do°.**

3 PAT: I phone ~mu:m~. £I p(h)one m(h)um c(h)onstantly£ .snhh

In Extract 22, the patient is suffering with alcohol dependence, depression and a host of related physical problems.

(22)

1 DOC: **An ho:w d'you ↑handle thi:s.**

2 (0.7)

3 PAT: I ↑don't_

As discussed previously, when the BATHE sequence had been initiated too early, the action being implemented by the 'H' question was often understood by patients as inquiring about any attempts they had made to manage their presenting problem so far. See Extracts 23 and 24 below. In Extract 23, the patient has presented with a recurrent ear problem, her main trouble being that it hurts to chew and she is experiencing occasional dizziness.

(23)

1 DOC: **And h<u>o</u>:w do you h<u>a</u>ndle that ˚when you get a (0.4) a flare up_˚**

2 PAT: ><u>U</u>hm I'm on p<u>ai</u>:n killers for a bad back anyway ˚so I kind'ov,˚

3 DOC: ˚Ri:ght_˚

4 PAT: ˚>jus' have to go with them<˚.

In Extract 24, the patient has presented with troubling groin and leg pains.

(24)

1 DOC: **HO- ↑WHAT ARE YOU DOING TO try a::n >y'know how're you handling it.< =What're**

2 **you [doing to try and make it better.**

3 PAT: [We:::ll (I wish a-) >at the moment< I'm jus takin' Paracetamols.

In both cases the knock on effect of the intervention being launched too early, and in Extract 23, the appending of "when you get a (0.4) flare up", contributes to them being understood by patients as inquiring about any attempts they had made to manage their presenting problem so far. In other words, the intended function of the 'H' question is somewhat undermined as the resolution of physical symptoms / complaints is largely the domain of the GP.

We also observed a smaller number of cases where GPs adapted the form of the question to a hypothetical inquiry e.g. "How *could* you handle this situation?" For example in Extract 25 below the patient has reported recently coming out of a dip in mood.

(25)

1 DOC: **.Hh and do yo:u, so if you find yourself going into a spiral, a downward spiral again, what will**

2 **you do about that. What can you do.**

In Extract 26, the patient has reported missing being able to go out for walks by herself as she has been feeling "giddy".

(26)

1 DOC: **.Hh ↑is there anything you could do: to change that?**

2 (0.5)

3 DOC: Cos I I know that you can get you can pay for somebody.

4 (0.8)

5 DOC: As a: companion, (0.4) to jus give you a helping ha:nd_ And if you had somebody that was

6 coming in for two hours a day, .h an paid them to come in, ↑they could take you out.

7 (0.7)

8 PAT: ↑O:h ↑I see?

Asking patients if they could think of ways in which they might handle their situation was felt to be a useful adaptation possibly giving them the space to consider solutions or ways of coping for the first time.

Empathy:

Following the series of BATHE questions, the 'E' component, encourages the expression of empathy or sympathy. Stuart and Lieberman (2015) argue that this component has three key functions: a) to affirm the nature of the patient's experience and its meaning; b) to promote relationship building by affiliating with the patient's stance; and c) to close the question series and allow GPs to transition to the next relevant activity. GPs sought affiliation with the experience reported by patients in 23/26 of our sample consultations.

In terms of form, most GPs sought affiliation using subjunctive assessments of the patient's prior talk (Heritage, 2011). Examples of these understanding claims can be seen in Extracts 27-30 below.

(27)

1 DOC: **>So that< must be really ↓ha:rd.**

2 PAT: ((*Nods*))

(28)

1 DOC: **>So: it must be (really) qui:te< (0.7) ↑°tough, irritating, frustrating?°**

2 PAT: ↓°Yea:h.°

(29)

1 DOC: **>So it SOUNDS LIKE IT'S NOT, (.) particularly brilliant at home at the moment with the pain.**

2 PAT: No:: it's not.

(30)

1 DOC: **I ↑think it's very hard ti:mes (.) for you:: at the ↓mo:me:nt.**

2 PAT: It=i:s_

This form preserves the patient and their experience as its focus thereby managing the problem of differential access to that experience (Heritage, 2011). Patients usually responded with confirmation as above. Alternatively, in Extract 31 below the patient disconfirms the GP's formulation.

(31)

1 DOC: **Must be a really tricky situation for you::,**

2 (0.5)

3 PAT: It's te:rribl:e, it's the worst thing that's ever happened to me

Following a delay in responding at line 2, the patient upgrades the GP's description, "really tricky", to "te:rribl:e, it's the worst thing that's ever happened to me". This more extreme alternative formulation is also marked by productional elements such as emphasis and sound stretching as shown in the transcript. Where positioned appropriately, GPs' affiliative displays functioned well as a pre-closing move allowing GPs to progress to next matters such as diagnosis and treatment. Extract 32 below offers a good illustration.

(32)

1 DOC: **>I know it must [be very very difficult for you an it's been a [real struggle_**

2 PAT: [Yea::h_ [Yea::h,

3 DOC: .Hhhh uh:m [well ↑le- ↑let's hope that (.) y'kno:w, let- well let's get a sa::mple of

4 PAT: [Ye::a::h.

5 DOC: you::r mo:::tio::ns, and send it [off to the .hh hospital an see what we can find out about it.

6 PAT: [Ye::a::h.

At line 1, the GPs pre-closing subjunctive assessment, “I know it must be very very difficult for you”, once confirmed by the patient at line 2, closes the sequence allowing a next move for the GP at line 3 proposing the business of further investigation.

Discussion

In our study all participating GPs in intervention practices received the same basic training. Initial monitoring of a sample of recorded consultations showed most of the BATHE components to be present. However, when left to their own interpretative devices, some GPs adhered to the training less than others. Despite the ‘B’ question being asked in 24/26 of the recorded consultations, deviations in terms of position and adaptations regarding composition were often highly consequential for fidelity of function. Moreover, because BATHE is a question series where each question-answer sequence cross-refers to the next, the patient’s response to ‘B’ then becomes the context for the ‘A’ question and so on. Failures to initiate the series in the right position were therefore often consequential for reducing the theoretical fidelity of the intervention as a whole.

The ‘A’ question was the component most likely to be absent. However, on some occasions this was because the patients had already volunteered how they were feeling. In these instances moving straight to the ‘T’ question was recipient-designed - an adaptation to the context - rather than a deviation from training. On other occasions GPs adapted the form of the ‘A’ question from a request for information to a request for confirmation which may have

had the unintended consequence of reducing the efficacy of the intervention. Finally, where BATHE had been initiated too early, the intended function of the 'A' question was mis-understood by patients as inquiring into how they were feeling physically rather than emotionally.

Despite the 'T' question being asked by GPs in the majority of our sample recordings, it was commonly asked in the context of the presenting problem rather than the wider psychosocial context for that problem. This was due to the BATHE sequence having been initiated too early in the consultation. On these occasions, despite promoting a patient-focused consulting style, the 'T' question failed to achieve its intended function instead functioning to narrow the patient's agenda. Moreover going forward, the relevance of the 'H' question is also then largely undermined as the resolution of physical symptoms / complaints is largely the domain of the GP.

GPs were observed to ask the 'H' question in most of the sample recordings. On the patient's side it revealed few constructive coping strategies. However because BATHE was commonly initiated too early, many patients understood the question as inquiring about ways in which they were currently managing their presenting problems. One adaptation observed was GPs asking patients to consider how they might cope or what other options they might consider in the future. This was felt to be useful in that it enhances the intended function of this aspect of the intervention.

When done in the 'correct' position, contiguous to the patient's own report of their experience, the 'E' component worked well to close the BATHE sequence as a whole allowing a smooth transition to usual care. GPs in our sample sought affiliation with patients following their reported experiences mostly by using formulations preserving the patient and their experience as their focus thereby managing the problem that faces GPs of differential access. Patient confirmatory responses indicated functional success, although in some cases

patients offered an upgraded alternative.

Castro, Barrera & Martinez (2004) have suggested there is often a tension between expectations around fidelity and the fit of interventions "in the wild". Hawe et al. argue that what is key is "to allow the form to be adapted while standardising the process and function" (2004, p. 1562). Our findings suggest a more complex relationship between form and function. Some adaptations of form, such as tailoring a question for the recipient, had no effect on function. However adaptations that transformed either the *action* being implemented or *where* it was implemented were highly consequential for function.

Although the data has provided significant insights into the extent our intervention was being delivered and received as planned, at two time points, and across different practices, the findings cannot be generalized to all 576 consultations where use of BATHE was reported. Our analysis focused on a small self-selected sample of GPs and patients who were willing to record a brief snapshot of their consultations specifically for the assessment of fidelity to training. However, despite the difficulties we have reported here, many of the GPs interviewed in the wider trial reported valuing BATHE as a tool for eliciting information about the wider context to patients' presenting problems. We agree, and have since used our findings to develop an evidence-based manual and online resources to optimise future BATHE training. As Borrelli argues, "well-trained providers are less likely to deviate from the treatment and are more likely to show increased competency to deliver the intervention" (2011, p. 4).

In a full trial where fidelity data were being collected for inclusion in analytic models, using CA methods alone would be limiting. We would advise a mixed methods approach (Moore et al. 2015) including comprehensive quantitative data on dose and reach, and qualitative data on reported barriers and facilitators to implementation, such as the backdrop of "habits and pragmatics" (Heritage & Robinson, 2011, p. 31) that may conspire against the introduction of any

new practice.

We have demonstrated how CA methods may be applied to the assessment of implementation fidelity in a feasibility trial of a talk-based intervention. This approach has provided a detailed picture of the practices that constitute the intervention described. It has also given a new dimension to understanding adaptations and deviations and in terms of their interactional consequences. Although this method requires some investment in terms of time and expertise, the potential rewards in terms of maximising patient benefit, optimising trial processes and scientific confidence are high.

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Table 1: All intervention practice recordings

Practice	GPs	In-surgery	Telephone	*n*
2	3	6	0	6
3	2	2	1	3
4	3	5 (3)	1	9
5	3	3 (1)	3 (1)	8
TOTAL	11	20	6	26

( ) = Verbal assent to record only

Box 1: Components of the BATHE consultation technique

BATHE is an acronym pertaining to a series of four linked questions and a closing statement as given below:

B = Background

Question 1. What is going on in your life?

A = Affect

Question 2. How do you feel about that?

T = Trouble

Question 3. What about the situation troubles you the most?

H = Handling

Question 4. How are you handling that?

E = Empathy

Closing Statement. That must be difficult for you (or something of an appropriately similar nature).

Stuart & Lieberman (2015)

Box 2: Key to transcription symbols

Transcription conventions (Jefferson, 2004)

. _ , ?	Hearable turn final, flat, slight rise and questioning intonation.
(.)	A micropause, hearable but too short to measure.
(1.0)	A 1 second stretch of silence.
>he said<	'Greater than' and 'lesser than' signs enclose speeded-up talk. Occasionally they are used the other way round for slower talk.
Underlining	The extent of underlining within individual words locates emphasis and also indicates how heavy it is.
↑↓	Marked pitch movement, over and above normal rhythms of speech beyond those represented by stops, commas and question marks.
she wa::nted	Colons show degrees of stretching of the prior sound
wha-	Hyphon indicates a cut-off
this=an that	Equals sign indicates latching between words or turns
[ ]	Square brackets mark the start and end of overlapping speech.
(unsure)	Transcriber uncertainty
((*Comment*))	Transcriber comments
°I know it°	Hearably quieter speech
CAPitals	Louder speech
.hhh	Hearable in-breaths
Hhh	Hearable expiration
£smile£	'Smile' voice
~wobbly~	'Wobbly' voice